Open Infrastructure - Task #7583

Handle etcd leader change or temporary unavailability gracefully in uncloud

01/07/2020 02:07 PM - Ahmed Bilal

Status:	Rejected		**Start date:**	01/07/2020
Priority:	Normal		**Due date:**	
Assignee:			**% Done:**	0%
Category:			**Estimated time:**	0.00 hour
Target version:				
PM Check date:				

Description

Here is leader change.

```
uncloud@server12:~$ uncloud scheduler

Traceback (most recent call last):
  File "/home/uncloud/.local/lib/python3.5/site-packages/etcd3/client.py", line 46, in handler
    return f(*args, **kwargs)
  File "/home/uncloud/.local/lib/python3.5/site-packages/etcd3/client.py", line 308, in
get_prefix_response
    metadata=self.metadata
  File "/home/uncloud/.local/lib/python3.5/site-packages/grpc/_channel.py", line 824, in __call__
    return _end_unary_response_blocking(state, call, False, None)
  File "/home/uncloud/.local/lib/python3.5/site-packages/grpc/_channel.py", line 726, in
_end_unary_response_blocking
    raise _InactiveRpcError(state)
grpc._channel._InactiveRpcError: <_InactiveRpcError of RPC that terminated with:
        status = StatusCode.UNAVAILABLE
        details = "etcdserver: leader changed"
        debug_error_string = "{"created":"@1578303042.125921981","description":"
Error received from peer ipv6:[2a0a:e5c0:2:12:0:f0ff:fea9:c43a]:2379","file":"
src/core/lib/surface/call.cc","file_line":1056,"grpc_message":"etcdserver: leader changed","
grpc_status":14}"
```

and here is temporary unavailability

```
Cannot connect to etcd: is etcd running as configured in
uncloud.conf?

Exception in
thread etcd3_watch_7fc862374c18:

Traceback (most recent call last)
:

  File "/usr/lib/python3.5/threading.py", line 914, in
_bootstrap_inner

    self.run()

  File "/usr/lib/python3.5/threading.py", line 862, in
run

    self._target(*self._args, **self._kwargs)

  File "/home/uncloud/.local/lib/python3.5/site-packages/etcd3/watch.py", line 126, in
_run
    metadata=self._metadata)
```

```
  File "/home/uncloud/.local/lib/python3.5/site-packages/grpc/_channel.py", line 1084, in __call__
    event_handler, self._context)
  File "/home/uncloud/.local/lib/python3.5/site-packages/grpc/_channel.py", line 1171, in create
    operationses_and_tags, context)
  File "src/python/grpcio/grpc/_cython/_cygrpc/channel.pyx.pxi", line 478, in
grpc._cython.cygrpc.Channel.integrated_call
  File "src/python/grpcio/grpc/_cython/_cygrpc/channel.pyx.pxi", line 296, in
grpc._cython.cygrpc._integrated_call
  File "src/python/grpcio/grpc/_cython/_cygrpc/channel.pyx.pxi", line 222, in
grpc._cython.cygrpc._call
  File "src/python/grpcio/grpc/_cython/_cygrpc/channel.pyx.pxi", line 262, in
grpc._cython.cygrpc._call
ValueError: Cannot invoke RPC: Channel closed!

Process Process-1:
Traceback (most recent call last):
  File "/home/uncloud/.local/lib/python3.5/site-packages/etcd3/client.py", line 46, in handler
    return f(*args, **kwargs)
  File "/home/uncloud/.local/lib/python3.5/site-packages/etcd3/client.py", line 426, in put
    metadata=self.metadata
  File "/home/uncloud/.local/lib/python3.5/site-packages/grpc/_channel.py", line 824, in __call__
    return _end_unary_response_blocking(state, call, False, None)
  File "/home/uncloud/.local/lib/python3.5/site-packages/grpc/_channel.py"
, line 726, in_end_unary_response_blocking
    raise _InactiveRpcError(state)
grpc._channel._InactiveRpcError: <_InactiveRpcError of RPC that terminated with:
        status = StatusCode.UNAVAILABLE
        details = "etcdserver: request timed out"
        debug_error_string = "{"created":"@1578304999.737401188","description":"
Error received from peer ipv6:[2a0a:e5c0:2:12:0:f0ff:fea9:c43a]:2379","file":"src/core/lib/$
urface/call.cc","file_line":1056,"grpc_message":"etcdserver: request timed out","grpc_status":14}"
```

Related issues:

Related to Open Infrastructure - Task #7590: Expect everything to fail (uncloud)	**Rejected**	**01/09/2020**

History

#1 - 01/08/2020 07:34 AM - Ahmed Bilal

The later unavailability is due to election for leader.

#2 - 01/08/2020 08:21 PM - Ahmed Bilal

We have to re-evaluate/re-check all the usage of etcd in uncloud to make sure we handle these events correctly/gracefully.

I have modified few things in get_prefix/watch_prefix that would help to correctly/gracefully handle etcd events for requests. For Example, `uncloud host` and `uncloud scheduler` used to crash previously in their blocked state (i.e when waiting for requests) whenever there is a leadership change or etcd unavailable temporarily.

#3 - 01/09/2020 08:52 AM - Ahmed Bilal

- Related to Task #7590: Expect everything to fail (uncloud) added

#4 - 02/26/2020 11:29 AM - Ahmed Bilal

- Status changed from New to Waiting

#5 - 12/01/2020 02:48 PM - Ahmed Bilal

- Assignee deleted (Ahmed Bilal)

#6 - 12/06/2021 11:54 PM - Nico Schottelius

- Status changed from Waiting to Rejected